PCT

RAW SEQUENCE LISTING   DATE: 07/16/2004
PATENT APPLICATION: US/10/501,002   TIME: 16:41:17

Input Set : A:\VPI.02.01.PCT.US.SEQ.LIS.txt
Output Set: N:\CRF4\07162004\J501002.raw

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 3  <110> APPLICANT: Xiaoling Xie
 5  <120> TITLE OF INVENTION: CRYSTAL STRUCTURES OF JNK-INHIBITOR COMPLEXES AND
 6        BINDING POCKETS THEREOF
 8  <130> FILE REFERENCE: VPI/02-01
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/501,002
C--> 11 <141> CURRENT FILING DATE: 2004-07-09
13  <150> PRIOR APPLICATION NUMBER: 60/348,002
14  <151> PRIOR FILING DATE: 2002-01-11
16  <160> NUMBER OF SEQ ID NOS: 7
18  <170> SOFTWARE: PatentIn Ver. 2.1
20  <210> SEQ ID NO: 1
21  <211> LENGTH: 422
22  <212> TYPE: PRT
23  <213> ORGANISM: Homo sapiens
25  <400> SEQUENCE: 1
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29  Lys Ile Ala Phe Cys Gln Gly Phe Asp Lys Gln Val Asp Val Ser Tyr
30              20                  25                  30
32  Ile Ala Lys His Tyr Asn Met Ser Lys Ser Lys Val Asp Asn Gln Phe
33          35                  40                  45
35  Tyr Ser Val Glu Val Gly Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr
36          50                  55                  60
38  Gln Asn Leu Lys Pro Ile Gly Ser Gly Ala Gln Gly Ile Val Cys Ala
39  65                  70                  75                  80
41  Ala Tyr Asp Ala Val Leu Asp Arg Asn Val Ala Ile Lys Lys Leu Ser
42          85                  90                  95
44  Arg Pro Phe Gln Asn Gln Thr His Ala Lys Arg Ala Tyr Arg Glu Leu
45             100                 105                 110
47  Val Leu Met Lys Cys Val Asn His Lys Asn Ile Ile Ser Leu Leu Asn
48             115                 120                 125
50  Val Phe Thr Pro Gln Lys Thr Leu Glu Glu Phe Gln Asp Val Tyr Leu
51          130                 135                 140
53  Val Met Glu Leu Met Asp Ala Asn Leu Cys Gln Val Ile Gln Met Glu
54  145                 150                 155                 160
56  Leu Asp His Glu Arg Met Ser Tyr Leu Leu Tyr Gln Met Leu Cys Gly
57             165                 170                 175
59  Ile Lys His Leu His Ser Ala Gly Ile Ile His Arg Asp Leu Lys Pro
60             180                 185                 190
62  Ser Asn Ile Val Val Lys Ser Asp Cys Thr Leu Lys Ile Leu Asp Phe
63             195                 200                 205
65  Gly Leu Ala Arg Thr Ala Gly Thr Ser Phe Met Met Thr Pro Tyr Val
66          210                 215                 220
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68 Val Thr Arg Tyr Tyr Arg Ala Pro Glu Val Ile Leu Gly Met Gly Tyr
69 225                     230                 235                     240
71 Lys Glu Asn Val Asp Ile Trp Ser Val Gly Cys Ile Met Gly Glu Met
72                     245                 250                 255
74 Val Arg His Lys Ile Leu Phe Pro Gly Arg Asp Tyr Ile Asp Gln Trp
75                 260                 265                 270
77 Asn Lys Val Ile Glu Gln Leu Gly Thr Pro Cys Pro Glu Phe Met Lys
78                 275                 280                 285
80 Lys Leu Gln Pro Thr Val Arg Asn Tyr Val Glu Asn Arg Pro Lys Tyr
81         290                 295                 300
83 Ala Gly Leu Thr Phe Pro Lys Leu Phe Pro Asp Ser Leu Phe Pro Ala
84 305                     310                 315                     320
86 Asp Ser Glu His Asn Lys Leu Lys Ala Ser Gln Ala Arg Asp Leu Leu
87                 325                 330                 335
89 Ser Lys Met Leu Val Ile Asp Pro Ala Lys Arg Ile Ser Val Asp Asp
90                 340                 345                 350
92 Ala Leu Gln His Pro Tyr Ile Asn Val Trp Tyr Asp Pro Ala Glu Val
93         355                 360                 365
95 Glu Ala Pro Pro Pro Gln Ile Tyr Asp Lys Gln Leu Asp Glu Arg Glu
96         370                 375                 380
98 His Thr Ile Glu Glu Trp Lys Glu Leu Ile Tyr Lys Glu Val Met Asn
99 385                     390                 395                     400
101 Ser Glu Glu Lys Thr Lys Asn Gly Val Val Lys Gly Gln Pro Ser Pro
102                 405                 410                 415
104 Ser Ala Gln Val Gln Gln
105                 420
108 <210> SEQ ID NO: 2
109 <211> LENGTH: 340
110 <212> TYPE: PRT
111 <213> ORGANISM: Homo sapiens
113 <400> SEQUENCE: 2
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115     1               5                 10                  15
117 Tyr Gln Asn Leu Ser Pro Val Gly Ser Gly Ala Tyr Gly Ser Val Cys
118                 20                  25                  30
120 Ala Ala Phe Asp Thr Lys Thr Gly Leu Arg Val Ala Val Lys Lys Leu
121             35                  40                  45
123 Ser Arg Pro Phe Gln Ser Ile Ile His Ala Lys Arg Thr Tyr Arg Glu
124         50                  55                  60
126 Leu Arg Leu Leu Lys His Met Lys His Glu Asn Val Ile Gly Leu Leu
127 65                  70                  75                      80
129 Asp Val Phe Thr Pro Ala Arg Ser Leu Glu Glu Phe Asn Asp Val Tyr
130                 85                  90                  95
132 Leu Val Thr His Leu Met Gly Ala Asp Leu Asn Asn Ile Val Lys Cys
133             100                 105                 110
135 Gln Lys Leu Thr Asp Asp His Val Gln Phe Leu Ile Tyr Gln Ile Leu
136             115                 120                 125
138 Arg Gly Leu Lys Tyr Ile His Ser Ala Asp Ile Ile His Arg Asp Leu
139         130                 135                 140
```

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Input Set : **A:\VPI.02.01.PCT.US.SEQ.LIS.txt**
Output Set: **N:\CRF4\07162004\J501002.raw**

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141 Lys Pro Ser Asn Leu Ala Val Asn Glu Asp Cys Glu Leu Lys Ile Leu
142 145                 150             155                 160
144 Asp Phe Gly Leu Ala Arg His Thr Asp Asp Glu Met Thr Gly Tyr Val
145             165             170             175
147 Ala Thr Arg Trp Tyr Arg Ala Pro Glu Ile Met Leu Asn Trp Met His
148             180             185             190
150 Tyr Asn Gln Thr Val Asp Ile Trp Ser Val Gly Cys Ile Met Ala Glu
151         195             200             205
153 Leu Leu Thr Gly Arg Thr Leu Phe Pro Gly Thr Asp His Ile Asp Gln
154     210             215             220
156 Leu Lys Leu Ile Leu Arg Leu Val Gly Thr Pro Gly Ala Glu Leu Leu
157 225             230             235             240
159 Lys Lys Ile Ser Ser Glu Ser Ala Arg Asn Tyr Ile Gln Ser Leu Thr
160             245             250             255
162 Gln Met Pro Lys Met Asn Phe Ala Asn Val Phe Ile Gly Ala Asn Pro
163             260             265             270
165 Leu Ala Val Asp Leu Leu Glu Lys Met Leu Val Leu Asp Ser Asp Lys
166         275             280             285
168 Arg Ile Thr Ala Ala Gln Ala Leu Ala His Ala Tyr Phe Ala Gln Tyr
169     290             295             300
171 His Asp Pro Asp Asp Glu Pro Val Ala Asp Pro Tyr Asp Gln Ser Phe
172 305             310             315             320
174 Glu Ser Arg Asp Leu Leu Ile Asp Glu Trp Lys Ser Leu Thr Tyr Asp
175             325             330             335
177 Glu Val Ile Ser
178             340
181 <210> SEQ ID NO: 3
182 <211> LENGTH: 342
183 <212> TYPE: PRT
184 <213> ORGANISM: Homo sapiens
186 <400> SEQUENCE: 3
187 Ala Gly Pro Glu Met Val Arg Gly Gln Val Phe Asp Val Gly Pro Arg
188 1               5               10              15
190 Tyr Thr Asn Leu Ser Tyr Ile Gly Glu Gly Ala Tyr Gly Met Val Cys
191             20              25              30
193 Ser Ala Tyr Asp Asn Val Asn Lys Val Arg Val Ala Ile Lys Lys Ile
194             35              40              45
196 Ser Pro Phe Glu His Gln Thr Tyr Cys Gln Arg Thr Leu Arg Glu Ile
197         50              55              60
199 Lys Ile Leu Leu Arg Phe Arg His Glu Asn Ile Ile Gly Ile Asn Asp
200 65              70              75              80
202 Ile Ile Arg Ala Pro Thr Ile Glu Gln Met Lys Asp Val Tyr Ile Val
203             85              90              95
205 Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu Leu Lys Thr Gln His
206             100             105             110
208 Leu Ser Asn Asp His Ile Cys Tyr Phe Leu Tyr Gln Ile Leu Arg Gly
209         115             120             125
211 Leu Lys Tyr Ile His Ser Ala Asn Val Leu His Arg Asp Leu Lys Pro
212     130             135             140
```

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PATENT APPLICATION: US/10/501,002   TIME: 16:41:17

Input Set : A:\VPI.02.01.PCT.US.SEQ.LIS.txt
Output Set: N:\CRF4\07162004\J501002.raw

```
214 Ser Asn Leu Leu Leu Asn Thr Thr Cys Asp Leu Lys Ile Cys Asp Phe
215 145               150               155               160
217 Gly Leu Ala Arg Val Ala Asp Pro Asp His Asp His Thr Gly Phe Leu
218               165               170               175
220 Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala Pro Glu Ile Met Leu
221               180               185               190
223 Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile Trp Ser Val Gly Cys
224           195               200               205
226 Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile Phe Pro Gly Lys His
227       210               215               220
229 Tyr Leu Asp Gln Leu Lys His Ile Leu Gly Ile Leu Gly Ser Pro Ser
230 225               230               235               240
232 Gln Glu Asp Leu Asn Cys Ile Ile Asn Leu Lys Ala Arg Asn Tyr Leu
233               245               250               255
235 Leu Ser Leu Pro His Lys Asn Lys Val Pro Trp Asn Arg Leu Phe Pro
236               260               265               270
238 Asn Ala Asp Ser Lys Ala Leu Asp Leu Leu Asp Lys Met Leu Thr Phe
239           275               280               285
241 Asn Pro His Lys Arg Ile Glu Val Glu Gln Ala Leu Ala His Pro Tyr
242       290               295               300
244 Leu Glu Gln Tyr Tyr Asp Pro Ser Asp Glu Pro Ile Ala Glu Ala Pro
245 305               310               315               320
247 Phe Lys Phe Asp Met Glu Leu Asp Asp Leu Pro Lys Glu Lys Leu Lys
248               325               330               335
250 Glu Leu Ile Phe Glu Glu
251               340
254 <210> SEQ ID NO: 4
255 <211> LENGTH: 256
256 <212> TYPE: PRT
257 <213> ORGANISM: Mus musculus
259 <400> SEQUENCE: 4
260 Asp Gln Phe Asp Arg Ile Lys Thr Leu Gly Thr Gly Ser Phe Gly Arg
261 1               5               10               15
263 Val Met Leu Val Lys His Lys Glu Ser Gly Asn His Tyr Ala Met Lys
264               20               25               30
266 Ile Leu Asp Lys Gln Lys Val Val Lys Leu Lys Gln Ile Glu His Thr
267           35               40               45
269 Leu Asn Glu Lys Arg Ile Leu Gln Ala Val Asn Phe Pro Phe Leu Val
270       50               55               60
272 Lys Leu Glu Phe Ser Phe Lys Asp Asn Ser Asn Leu Tyr Met Val Met
273 65               70               75               80
275 Glu Tyr Val Ala Gly Gly Glu Met Phe Ser His Leu Arg Arg Ile Gly
276               85               90               95
278 Arg Phe Ser Glu Pro His Ala Arg Phe Tyr Ala Ala Gln Ile Val Leu
279               100               105               110
281 Thr Phe Glu Tyr Leu His Ser Leu Asp Leu Ile Tyr Arg Asp Leu Lys
282           115               120               125
284 Pro Glu Asn Leu Leu Ile Asp Gln Gln Gly Tyr Ile Gln Val Thr Asp
285       130               135               140
```

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Input Set : A:\VPI.02.01.PCT.US.SEQ.LIS.txt
Output Set: N:\CRF4\07162004\J501002.raw

```
287 Phe Gly Phe Ala Lys Arg Val Lys Gly Arg Thr Trp Thr Leu Cys Gly
288 145             150             155             160
290 Thr Pro Glu Tyr Leu Ala Pro Glu Ile Ile Leu Ser Lys Gly Tyr Asn
291             165             170             175
293 Lys Ala Val Asp Trp Trp Ala Leu Gly Val Leu Ile Tyr Glu Met Ala
294             180             185             190
296 Ala Gly Tyr Pro Pro Phe Phe Ala Asp Gln Pro Ile Gln Ile Tyr Glu
297         195             200             205
299 Lys Ile Val Ser Gly Lys Val Arg Phe Pro Ser His Phe Ser Ser Asp
300     210             215             220
302 Leu Lys Asp Leu Leu Arg Asn Leu Leu Gln Val Asp Leu Thr Lys Arg
303 225             230             235             240
305 Phe Gly Asn Leu Lys Asp Gly Val Asn Asp Ile Lys Asn His Lys Trp
306             245             250             255
309 <210> SEQ ID NO: 5
310 <211> LENGTH: 39
311 <212> TYPE: DNA
312 <213> ORGANISM: Artificial Sequence
314 <220> FEATURE:
315 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
317 <400> SEQUENCE: 5
318 gctctagagc tccatgggca gcaaaagcaa agttgacaa                     39
321 <210> SEQ ID NO: 6
322 <211> LENGTH: 37
323 <212> TYPE: DNA
324 <213> ORGANISM: Artificial Sequence
326 <220> FEATURE:
327 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
329 <400> SEQUENCE: 6
330 tagcggatcc tcattctgaa ttcattactt ccttgta                     37
333 <210> SEQ ID NO: 7
334 <211> LENGTH: 21
335 <212> TYPE: PRT
336 <213> ORGANISM: Homo sapiens
338 <400> SEQUENCE: 7
339 Lys Arg Glu Leu Val Glu Pro Leu Thr Pro Ser Gly Glu Ala Pro Asn
340     1               5               10              15
342 Gln Ala Leu Leu Arg
343             20
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VERIFICATION SUMMARY   DATE: 07/16/2004
PATENT APPLICATION: **US/10/501,002**   TIME: 16:41:18

Input Set : **A:\VPI.02.01.PCT.US.SEQ.LIS.txt**
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L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date